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# *Rosellinia jiangxiensis* and *R. yunnanensis* spp. nov. and a new *Rosellinia* record from China

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Abstract—Two new species, *Rosellinia jiangxiensis* and *R. yunnanensis*, are proposed for specimens collected in China, and *R. leopoldensis* is recorded as new to China.

Key words—*Ascomycota*, pyrenomycetous fungi, taxonomy, *Xylariaceae*

## Introduction

Mycological investigations dealing with two new *Rosellinia* species from Southern China were published by Li & Guo (2015, 2016). Two additional new species of *Rosellinia*, collected in Jiangxi and Yunnan Provinces, are described here, and *R. leopoldensis* is reported as a new record for China. These specimens are conserved in Herbarium Mycologicum Academiae Sinicae, Beijing, China (HMAS).

## Materials & methods

The specimens were examined using a Motic SMZ-168 stereomicroscope. Microscopic features of asci and ascospores were described from slide preparations mounted in water and Melzer's reagent, and measurements were made from 20 ascospores, using a Zeiss Axioskop 2 plus compound microscope. Stromata were photographed using a Sony NEX-7 digital camera.

## Taxonomy

***Rosellinia jiangxiensis*** Wei Li bis & L. Guo, **sp. nov.** Figs 1–3

Fungal Name FN 570498

Differs from *Rosellinia gisbornia* by its broader ascospores and larger ascus apical ring.

Type: China, Jiangxi, Nanchang, Meiling, alt. 200 m, on twig, 28.X.2016, L. Guo 11971 (**Holotype**, HMAS 255161).

Etymology: The epithet refers to the type locality, Jiangxi Province.

Subiculum dark brown, evanescent. Stromata solitary to gregarious, subglobose to cupulate, dark brown to black, 800–875 × 650–800 µm. Ostioles papillate, black. Ectostroma 50–100 µm thick, black. Entostroma disappearing in old stage. Perithecia globose or subglobose (620–750 × 380–500 µm). Ascus apical ring bluing in Melzer's iodine reagent, 9–14 µm tall, diameters 4–5 µm above, 4–6 µm below. Ascospores asymmetrically ellipsoidal, usually with broadly to narrowly rounded ends (sometimes pinched at one end), completely surrounded by a slimy sheath thicker at both ends, 25–31 × 7–11 µm, brown, with straight germ slit extending the length of the spore.

Comments: *Rosellinia jiangxiensis* is similar to *R. gisbornia* L.E. Petrini, which differs in its cream-coloured to light brown subiculum, thinner (50-75 µm) ectostroma, narrower (6.7–8.6 µm) ascospores, and ascus apical rings that are shorter (4.8–8.6 µm) and narrower (2.8–4.8 µm above, 2.8–3.8 µm below (Petrini 2003, 2013b).

***Rosellinia yunnanensis*** Wei Li bis & L. Guo, **sp. nov.** Figs 4–6

Fungal Name FN 570499

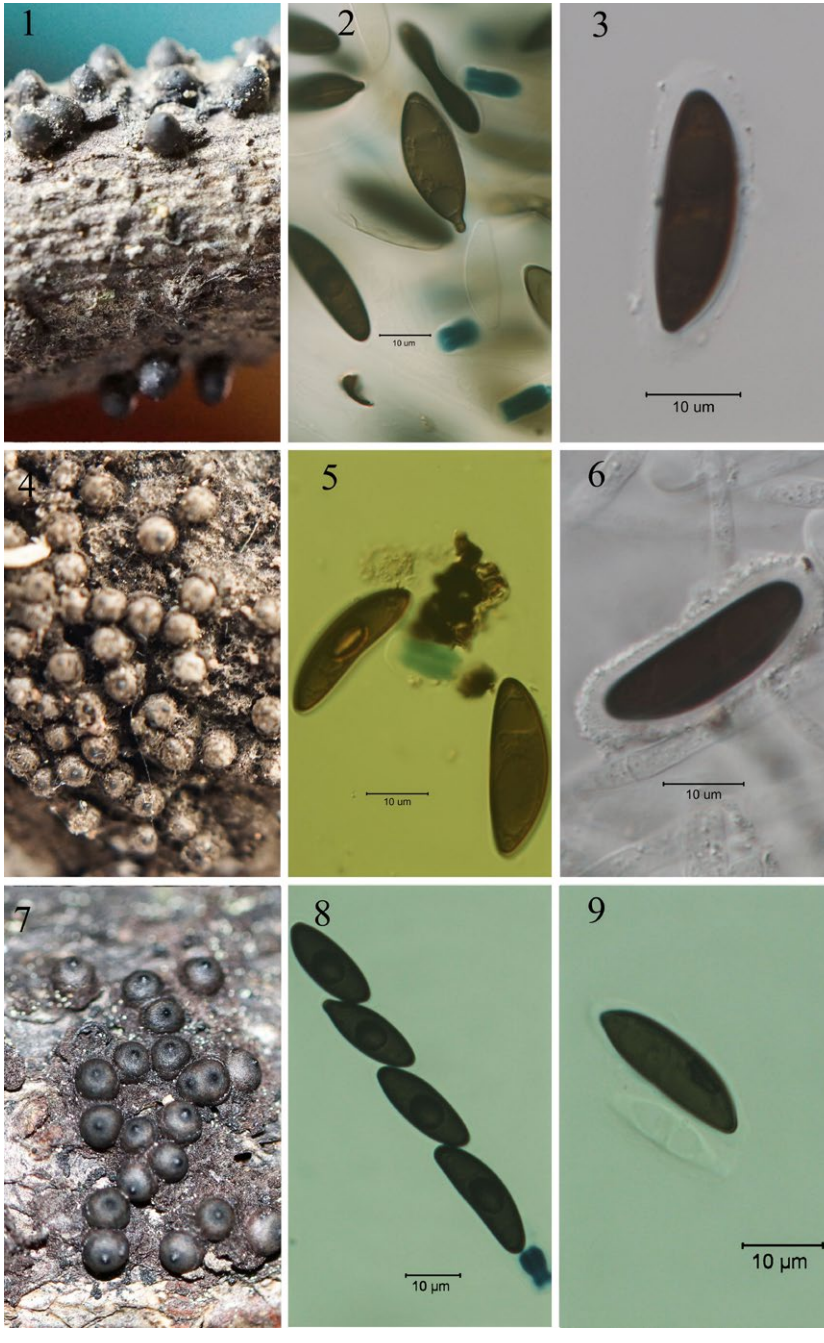
Differs from *Rosellinia leopoldensis* by its taller ascus apical ring; and from *R. caudata* by its ascospores lacking a cellular appendage.

Type: China, Yunnan, Puer, alt. 1470 m, on unidentified wood, 17.III.2017, L. Guo 12190 (**Holotype**, HMAS 255162).

Etymology: The epithet refers to the type locality, Yunnan Province.

Subiculum well developed, woolly, felted or interlaced, dark brown, retained at maturity. Stromata solitary to densely gregarious, subglobose, brown, 750–1000 µm × 800–1000 µm, with the bases embedded in the subiculum. Ostioles papillate, black. Ectostroma 150–200 µm thick, black. Entostroma disappearing at maturity. Perithecia subglobose, 500–600 × 600–700 µm. Ascus apical ring bluing in Melzer's iodine reagent, 10–15 µm high, diameter 5–6 µm above, 5–6.5 µm below. Ascospores asymmetrically ellipsoidal, with broadly to narrowly rounded ends, surrounded completely by a slimy sheath

Figs 1–9. ***Rosellinia jiangxiensis*** (HMAS 255161, holotype). 1. Stromata on twig; 2. Ascospores and ascus apical rings; 3. Ascospore. ***Rosellinia yunnanensis*** (HMAS 255162, holotype). 4. Stromata on wood; 5. Ascospores and ascus apical ring; 6. Ascospore. ***Rosellinia leopoldensis*** (HMAS 245738). 7. Stromata on wood; 8. Ascus and ascospores; 9. Ascospore.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that is thicker at ends, 21–31 × 5.5–10 μm, brown, with straight germ slit extending the length of the spore.

Comments: *Rosellinia yunnanensis* is similar to *R. leopoldensis*, which differs in its shorter (7–8 μm) ascus apical ring (Petrini 2013a,b). *Rosellinia caudata* Petch differs from *R. yunnanensis* by its ascospores having a cellular appendage at one end (Petrini 2013b).

***Rosellinia leopoldensis*** L.E. Petrini, Index Fungorum 25: 3, 2013. Figs 7–9

Subiculum well developed, woolly, felted or interlaced, dark brown, retained at maturity. Stromata often densely gregarious, sometimes solitary, covered with basic subiculum, subglobose but laterally squashed, 900–1100 × 800–1200 μm, brown. Ostioles papillate, black. Ectostroma 60–100 μm thick, black. Entostroma disappearing at maturity. Perithecia subglobose, 700–800 μm high, 800–900 μm diam. Ascus apical ring dark bluing in Melzer's iodine reagent, 7–8 μm tall, diameter 3–4.5 μm above, 3.5–5 μm below. Ascospores asymmetrically ellipsoidal, with rounded or pinched ends, surrounded by a slimy sheath being thicker at ends, 18–25 × 6–10 μm, dark brown, with straight germ slit extending the length of the spore.

Specimens examined: **CHINA**, **Heilongjiang**, **Yichun**, Wuying National Forest Park, alt. 430 m, on corticated wood, 26.VIII.2014, W. Li 14104 (HMAS 245738); W. Li 14105 (HMAS 245741).

Comments: The collection from Wuying National Forest Park represents a new record for China. Our specimens are morphologically similar to the holotype, but their ascus apical rings were slightly taller than those of the holotype (5.5–7 μm; Petrini 2013a).

## Discussion

Including the three species reported in this paper, we now recognize 41 *Rosellinia* species in China (Teng 1963, Tai 1979, Ju & Rogers 1990, 1999; Yuan & Zhao 1993, Lu & al. 2000, Liu & al. 2010, Petrini 2013a,b; Li & Guo 2015, 2016; Li & al. 2015, Su & al. 2016).

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